

### **REMARKS**

Claims 1-21 are pending in this application for the Examiner's review and consideration. Applicant appreciates the Examiner's allowance of claims 1-5 and 7-21 in the Office Action mailed on April 6, 2005. Applicant also appreciates the Examiner's suggestion in the March 31, 2005 telephonic interview to amend claim 6 to meet the conditions for allowance. In accordance with your suggestion, claim 6 was amended to depend from claim 1 with the limitation "wherein an absolute value of a  $\zeta$  potential of the inkjet ink is in the range of 3 mV to 60 mV." Additionally, claim 12 was amended to correct the typographical error noted in your objection. According to your suggestion, the portion of the claim that recited " $0.25 \leq W_3/W_1 < 0.75$ " now recites " $0.25 \leq W_3/W_1 \leq 0.75$ ." Support for this limitation can be found at least in the specification at page 9, line 13. No new matter is added by these claim amendments so that their entry at this time is warranted.

### **Rejection Under 35 U.S.C. § 103**

Claim 6 was rejected under 35 U.S.C. § 103 as allegedly being obvious over U.S. Patent No. 6,153,001 to Suzuki *et al.* ("Suzuki") in view of U.S. Patent No. 6,378,999 to Doi *et al.* ("Doi"). Applicant respectfully submits that claim 6, currently amended in accordance with your suggestion to depend from claim 1, overcomes this rejection

Suzuki discloses an inkjet ink comprising water, an aqueous organic solvent, a surfactant, and a self-dispersible pigment, wherein the ink has the following characteristics:

- (a) the number average particle diameter of dispersed particles of the pigment is from 15 to 100 nm;
- (b) the  $mv/mn$  is less than or equal to 3 (wherein  $mv$  is the volumetric average particle diameter of the dispersed particles of the pigment and  $mn$  is the number average particle diameter of the dispersed particles of said pigment);
- (c) the number of particles having a particle diameter greater than or equal to 0.5  $\mu m$  among the dispersed particles of the pigment contained in one liter of the ink is less than or equal to  $7.5 \times 10^{10}$ ;
- (d) the surface tension of the ink is less than or equal to 60 mN/m;
- (e) the electroconductivity of the ink is from 0.05 to 0.4 S/m; and
- (f) the pH of the ink is from 6 to 11. (Suzuki, col. 2, lines 13-37).

Suzuki also teaches a  $W_2/W_1$  equal to 1, wherein  $W_1$  represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink and  $W_2$  represents a content (% by mass) of

the second water-soluble solvent group contained in the inkjet ink (Suzuki, Example I-5, col. 22, lines 6-9). Suzuki is silent regarding an absolute value of a  $\zeta$  potential of the inkjet ink in the range of 3 mV to 60 mV.

Doi is directed to an aqueous ink jet recording liquid including at least water, a water-soluble organic solvent and a water-insoluble coloring material, wherein the absolute value of the zeta potential is 20mV or more (Doi, col. 2, lines 39-43).

The present invention, as recited in claim 6, is directed to an inkjet ink comprising a pigment, a water-soluble solvent and water, the water-soluble solvent comprising:

a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter  $SP_1$ ;

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than the solubility parameter  $SP_1$  and;

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter  $SP_1$ ;

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2),  $n$  represents an integer of 3 to 6;  $R$  represents hydrogen or a methyl group;  $W_1$  represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink;  $W_2$  represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and  $W_3$  represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink, and wherein an absolute value of a  $\zeta$  potential of the inkjet ink is in the range of 3 mV to 60 mV.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference

teachings; (2) there must be a reasonable expectation of success; and (3) the prior art references must teach or suggest all of the claim limitations. See Manual of Patent Examining Procedure (MPEP) § 2142, citing *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

Applicant submits that the combination of Suzuki and Doi does not teach or suggest all of the claim limitations of amended claim 6, which now depends from allowed claim 1. Neither Suzuki nor Doi teaches or suggests an ink wherein the ratio of the second water-soluble solvent group to the first water-soluble solvent group ( $W_2/W_1$ ) is greater than or equal to 1.5. For at least this reason, the combination of Suzuki and Doi does not render obvious amended claim 6 of the present invention.

**CONCLUSIONS**

It is respectfully submitted that the remaining claim is now in condition for allowance, early notice of which would be appreciated. Should the Examiner disagree, Applicant respectfully requests a telephonic or in-person interview with the undersigned attorney to discuss any remaining issues and to expedite the eventual allowance of the claims.

No fees are believed to be required for this submission. Should any fees be required, however, please charge those fees to Morgan, Lewis & Bacchius LLP deposit account no. 50-0310.

Respectfully submitted,

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